Site 195 Memorial Park

Overview: The Memorial Park potential restoration site is located south of Route 22 approximately 0.2 mi west of the intersection with Route 133 in Essex. The site is contained on a municipally–owned parcel that includes two softball fields and is currently being used as a staging area for the municipal sewer project. The area consists of approximately 3.2 ac of former wetland fill within salt marsh along Alewife Brook, however; only small portion of the former fill may be available for restoration. Alewife Brook joins the Essex River approximately 0.25 mi east of the site. Road. The former salt marsh was filled after 1945, based on a review of historical USGS mapping (Ipswich, MA Quadrangle USGS 7.5 Minute Series). The fill has reportedly been in place for over 40 years and the area has historically been used for storage of materials by the DPW (S. Gersh, Essex Conservation Commission, pers. comm.).

Portions of both softball fields, as well as the baseball field adjacent to the Town Hall experience regular flooding. The Town intends to raise the elevation of all three fields by approximately 2 to 3 ft with the excess soil generated during construction of a large municipal sewer project. At the time of the site inspection, approximately one-third of the site was covered by a large stockpile of excavated material intended to be spread over the fields. The Conservation Commission recently issued an Order of Conditions to complete the work. The ball fields are important recreational features and any salt marsh restoration efforts which resulted in the loss of the fields would not be supported by the Town (B. Zubricki, Essex Town Administrator, pers. comm.). Therefore, the only areas available for restoration include narrow fringes of fill bordering the existing marsh. Further coordination with the Town is necessary to identify areas which can be restored without impacting use of the fields. Berger estimates the potential restoration area to be approximately 20,000 sq ft. The proposed work on the fields will bring the ground elevation along the edge to 10 ft (NGVD). The adjacent high marsh is typically growing at elevations below 5.5 feet. The nature of the original fill material is unknown.

Structure conditions: There are no structures associated with this potential restoration site.

Ecological Integrity: The site currently consists of 2 to 3 ft of unknown fill material over the original salt marsh plain. The town intends to add an additional 2 ft of excess soil from the sewer project over the former soft ball fields. Based on conservations with municipal officials, the only potential areas available for restoration are narrow bands along the leading edge of the fill, as long as the restoration does not impact the fields. This edge is generally vegetated with upland herbaceous growth with a few small areas containing *Phragmites*. In general, the adjacent salt marsh exhibits a high degree of ecological integrity with a diversity of habitat types. Alewife Brook supports an anadromous fish run. Recent improvements to the parking area for the adjacent commercial and municipal buildings included measures to treat non-point source pollution. The limits of the municipally owned parcel include portions of the existing marsh to the south and east. The adjacent salt marsh is contained within BioMap Core Habitat. Land uses along Route 22 are high density residential commercial and recreational land. The Essex River downstream of the potential restoration site includes substantial soft shell clam beds.

There were no tide data collected for the site. Overall, the severity of the existing impairments are considered severe. Removal of the fill material to near or slightly below the adjacent marsh elevation will restore salt marsh vegetation and lost flood storage volume. Due to the narrow area potentially available for restoration, no additional ditching would be required. Fill removal should target the small areas of *Phragmites* to minimize further expansion of these stands.

Socioeconomic: Recreational values of the potential restoration site are enhanced by the excellent public access and wildlife viewing opportunities provided by the adjacent recreational lands, as well as available on-site parking. The municipal ownership status, good access, and level of use by children greatly enhance educational opportunities. However, there is no known ongoing research or nearby schools. The potential restoration site does not include any urban setting values. The adjacent Town Hall is listed on the State Registry of Historic Places.

Construction Logistics/Feasibility: Issues associated with removing of fill along the fringe of the recreational fields will involve construction access and the disposal of fill material of unknown quality. There are no known utilities concerns and there are ample staging areas adjacent to the site. Based on a restoration area of approximately 20,000 sq ft and the removal of 3,000 cubic ft of fill, the total construction cost estimate for this potential restoration site is estimated to be $90,000. The level of local support requires a closer review of the potential area available.

Restoration Potential: Despite the presence of several important socioeconomic factors including the high recreational and educational value, public land status, and the extent of the existing impairments as filled marsh, the site is considered to have a low restoration potential based primarily on the limited area available and potential concerns associated with the nature of the fill material. The potential is also limited by the relatively large cost per acre which is related to the overall size of the project. These costs can be substantially reduced if the effort were tied to other municipal project requiring mitigation. Key steps toward implementation involve further coordination with the Town to determine exact locations in which fill could be removed without impacting recreational uses and to gauge the level of local support for the work. Soil testing should be done within potential fill removal areas to identify any contamination concerns.

Site # 195 | Site Features | Scale: 1:2,500

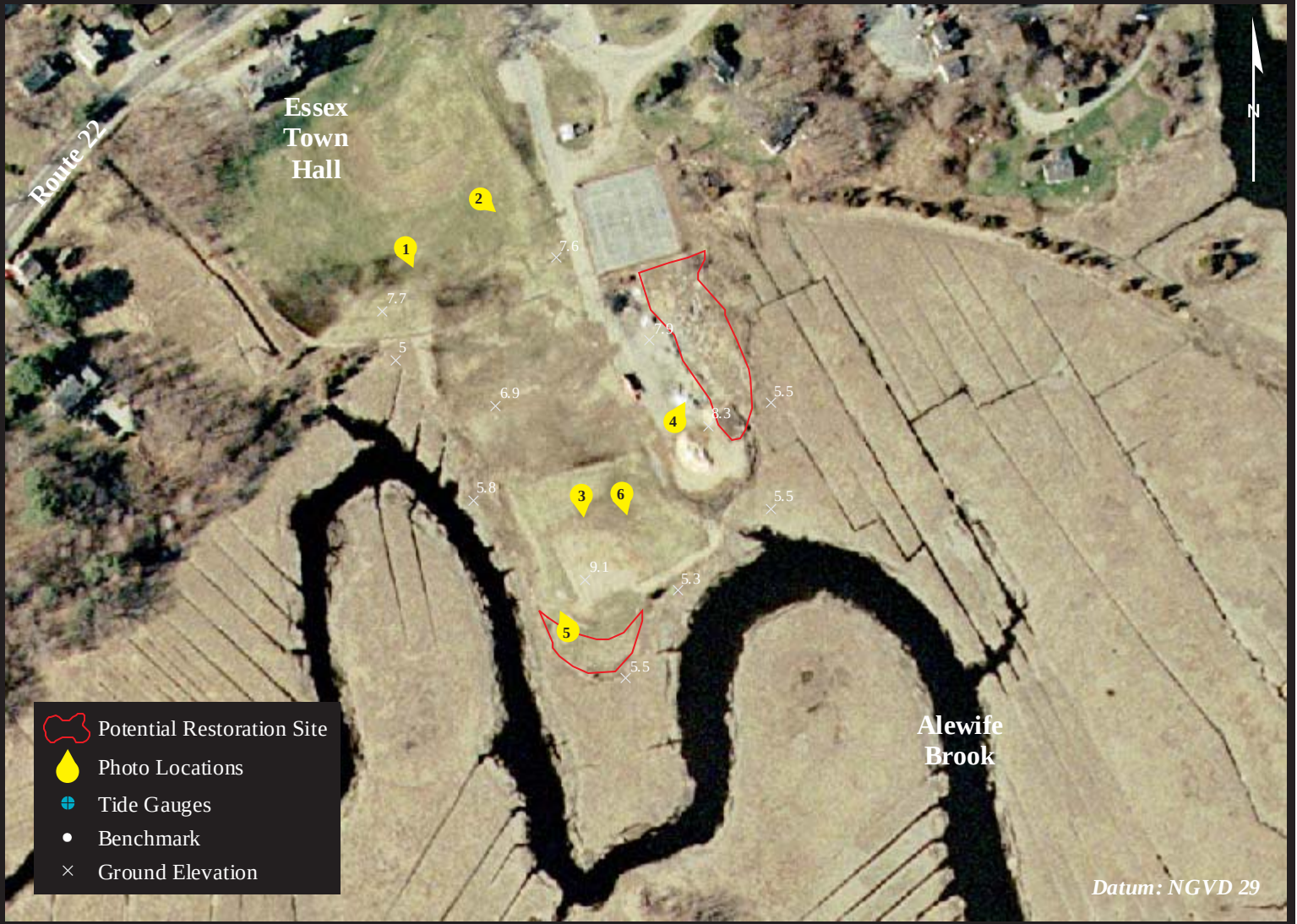

Photo 1 - Eastern Edge of Site Viewing South

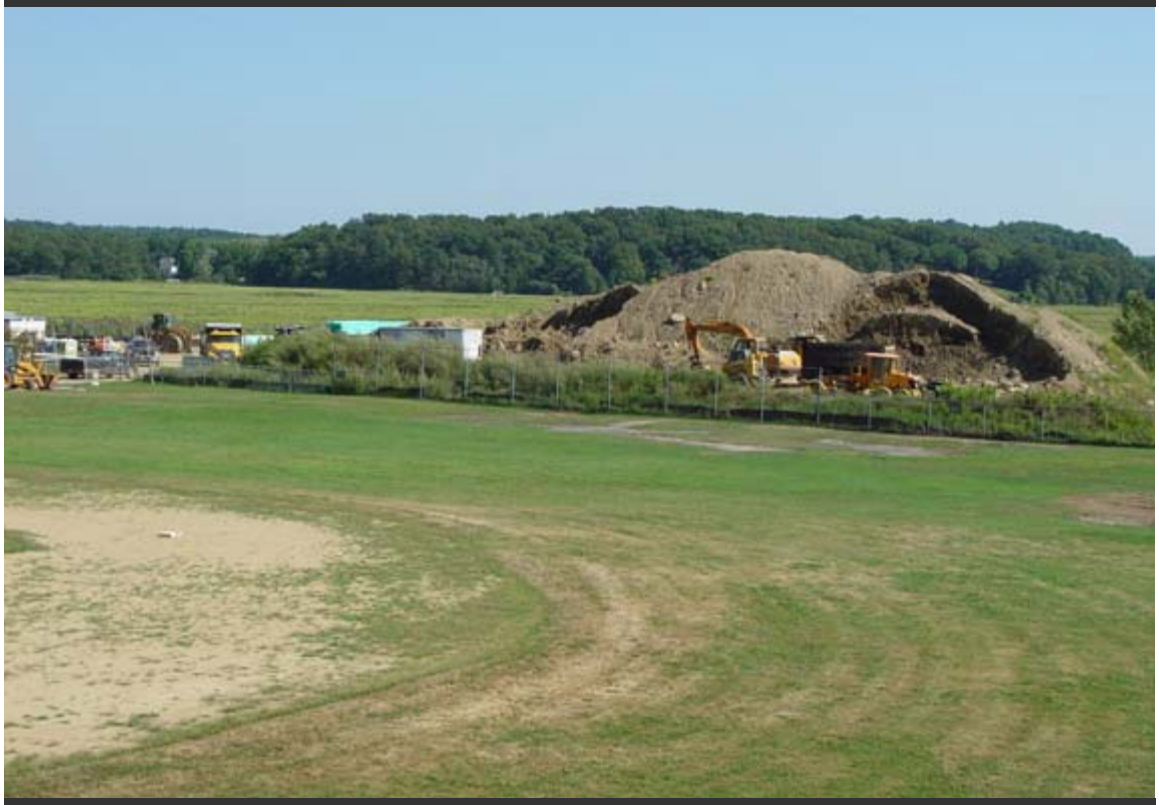

Photo 2 - Western Edge of Site Viewing South

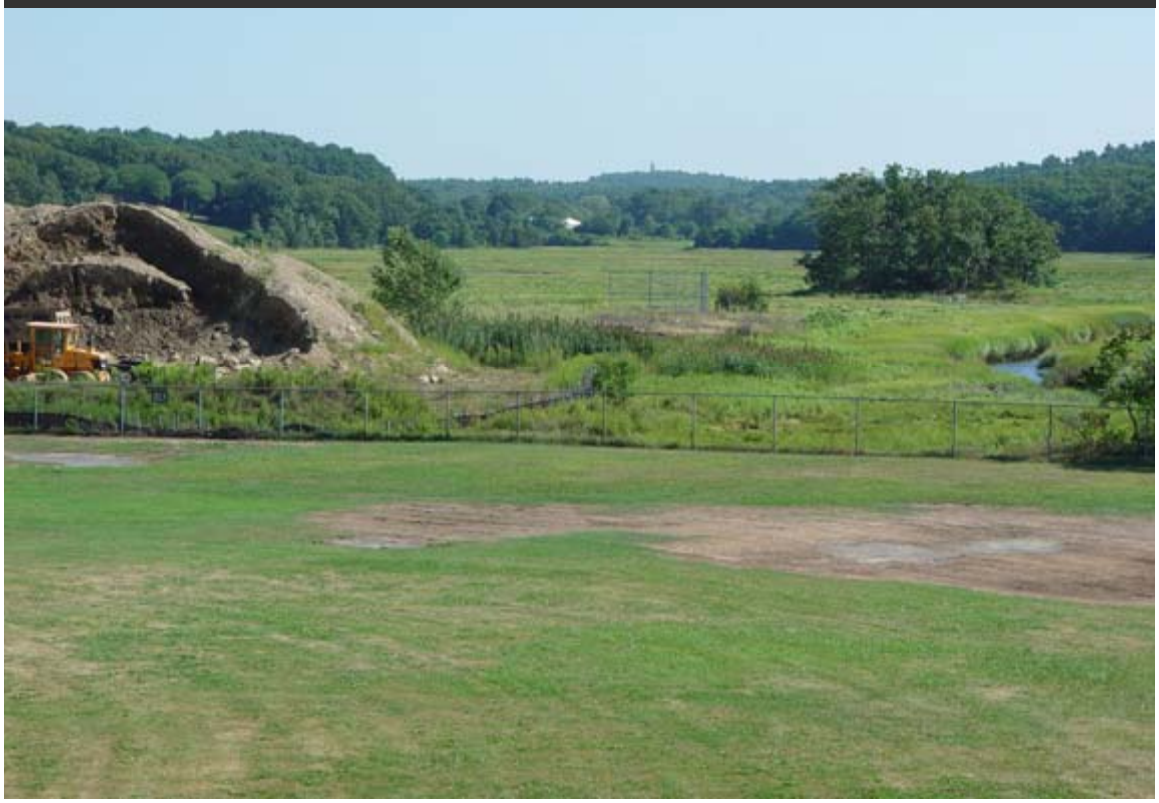

Photo 3 - Southern Limit of Fill

Photo 4 - Eastern Limit of Fill Viewing East

Photo 5 - Western Edge of Fill Viewing North

Photo 6 - Eastern Limit of Fill Viewing South

Great Marsh Coastal Wetlands Restoration Planning
Rapid Field Assessment

Site # 195
Memorial Park

Site Information

Site ID: 195
Site Name: Memorial Park
Municipality: Essex
Location: South of Town Hall off Route 22, 0.2 mi west of intersection with Route 133
Adjacent Waterbody: Essex River

Affected Area (Acres)

Mudflat/Open Water:	0	Total Area:	0.5
Salt Marsh:	0		
Other Wetland:	0	*Other Description:*	
Other:	0.5	Fill	

Impairment(s)

Tidal Restriction	☐	Fill	☑
Obstructed Ditche(s)	☐	Invasive Species	☑
Impoundment	☐	Pollution / Siltation	☐

Severity of Impairments: Severe

Project Type

Roadway Culvert(s)	☐	Obstructed Ditches	☐
Bridge	☐	Fill	☑
Berm	☐	Other	

Evidence of Restriction

Gauge Data	☐	Impounded Flow	☐
Downstream Scour Pool	☐	Obstructed Flow	☐
Upstream Scour Pool	☐	Invasive Species	☐
Bank Erosion	☐	Ponded Conditions	☐
Slumping	☐	Subsidence	☐

Structure / Channel:

Overall Condition:
Life Expectancy (Years):
Road Condition:
Structure Type:
Structure Age (Years)
Structure 1 Width (Feet):
Structure 1 Length (Feet):
Structure 2 Width (Feet):
Structure 2 Length (Feet):
Skew (Degrees):
Cover (Feet):
Scour Protectection: ☐
Adequately Aligned: ☐
Headwall Type:
Headwalll Condition:

Ecological Integrity / Habitat Value

Surrounding Land Use %

Commercial / Industrial	35
Residential	25
Agricultural	0
Undeveloped	40

Severity of Impairment(s): Severe
Invasive Plant Cover: Low
Extent of Wooded Buffer: Poor
Habitat Connectivity: Fair
NHESP Estimated Habitats of Rare Wildlife: ☐
NHESP Priority Habitats of Rare Species: ☐
NHESP BioMap Core Habitat: ☑
NHESP BioMap Supporting Natural Landscape: ☐
ACEC: ☐
Anadromous Fish: ☑
Shellfishing Suitability: ☑
Barriers to Fish Passage: None

Great Marsh Coastal Wetlands Restoration Planning
Rapid Field Assessment

Site # 195
Memorial Park

Construction Logistics / Feasibility

Traffic Volume	Low
Detour Potential	☑
Site Access	Good
Staging Areas	☑
Fill Material Concern	Moderate
Low Lying Property Concerns	Minimal
Overhead Utility Constraint	None

Underground Utilities

Water	☐	*Telephone*	☐
Gas	☐	*Sewer*	☐
Electric	☐	*Drainage*	☐

Permitting Complexity	Low
Local Support	Unknown
Feasibility Cost	15,000
Design Cost	20,000
Permitting Cost	15,000
Construction Cost	90,000
Total Cost	140,000
Relative Cost/Acre	280,000

Socioeconomic

Recreation

Public Access:	☑
Watercraft / Portage:	☐
Wildlife Viewing:	☑

Education

Schools Nearby:	☐
Ongoing Research:	☐
Education / Outreach Potential:	High
Saftey Concerns (Access):	Low

Uniqueness / Heritage Value

Rare Species Habitat:	☐
ACEC:	☐
Cultural Resource Features	☑
Urban Viewscape Value:	None
Urban Habitat Value:	None

Tide Surveys

	Start:		*Finish:*
Dates of 1st Survey:		-	
Date of Highest Tide:			
Max Measured Tidal Dampening:			
Percent of Tidal Prism:			
Measured Delay:			

	Start:		*Finish:*
Dates of 2nd Survey:		-	
Date of Highest Tide:			
Max Measured Tidal Dampening:			
Percent of Tidal Prism:			
Measured Delay:			

Summary

Uniqueness / Heritage Value:	Medium	Ecological Integrity:	Low
Recreational Value:	High	Logistics / Feasibility:	Medium
Educational Value:	High		

Restoration Potential: Low